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BULLETIN NO. 51

HOW TO INCREASE THE PRODUCTION OF PORK

— BY —

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- Keep one more sow.
- Make a good choice.
- Feed sufficiently, but economically.
- House in a sanitary manner.
- Raise the young with care until weaning time.
- Make good use of dairy by-products for the young pigs.
- Economize grain with pasture, green fodder and roots.
- Manage rearing and fattening so that the hogs weigh about 200 lbs. when seven months old.
- Breed your sows for a second litter in the autumn.

Published by order of
The Honourable J. Ed. Caron, Minister of Agriculture
Province of Quebec



An appeal to Canadian farmers



READ and ACT

The Honourable J.-Ed. Caron, Minister of Agriculture :

Amidst the horrors of the war, the vicissitudes of politics and the universal perturbation of everything, there is one fact, already foreseen but neglected, which commences to make itself acutely and anxiously felt : the world is threatened with famine.

... The following are the motives that have caused us to make this new appeal :

The first, is that in producing more, the farmers will logically reap an actual monetary profit.

The second, is that they will lessen for themselves and for others, the risks of famine awaiting us.

The third, is that in exporting the surplus of food products, they will aid in the most efficacious manner, the cause of the allied armies—a cause common to civilized humanity.



Mr. Antonio Grenier, Deputy Minister of Agriculture :

... launching a great production campaign to reach every corner of the Province of Quebec and in which we wish to interest everybody from the lowest to the highest. We want all influences, all efforts, all goodwill to converge towards a same purpose : increase production.

We are convinced there is not a single farmer in the Province of Quebec who will refuse to do his share, however small it may be, when he has been shown that it is to his own interest first, to that of his fellow citizens, of the Province and of the entire country ; when he has been reminded that Canada and each of its inhabitants have contracted the obligation to feed our soldiers, those of our allies and the civil population of England, France, Belgium, Italy, etc.

Mr. W. J. Hanna, Food Controller of Canada :

I think it a business principle for every farmer to increase his production of swine as much as possible in 1918. I am certain the nation needs such increase to help in obtaining victory.

Lord Rhondda, Food Controller of England :

If America could not supply the food the Allies are in need of, victory would slip through their hands.



HOW TO INCREASE THE PRODUCTION OF PORK

The program of the production campaign is contained in four words:

Pork - Wheat - Beans - Peas

The above products were not selected haphazardly.

Reasons for an increased production of pork.

Let us first remark—it is very important—that the increase in the production of pork must not be made to the detriment of other productions. The Province of Quebec must not neglect its dairy industry: butter and cheese are necessary. The flocks of sheep must be maintained and even increased, for mutton and wool are selling at extraordinary prices. However breeders must especially converge their efforts towards the production of pork. Why? Because salt pork or bacon is the most advantageous food to ship to the Allies and because also it is the food which can be most rapidly produced by us

Nutritive advantages of pork :

1o It is the most nutritive food, one pound of pork containing more nutritious elements or calories than a pound of any other meat. One pound of:

Salt pork or bacon, contains.....	2930 calories
Mutton	1520 calories
Fat beef	1180 calories
Lean beef	670 calories
Veal	640 calories

2o Pork contains less bone and waste than any other meat :

Bacon.....	7 per cent bone
Beef.....	20 per cent bone
Mutton.....	20 per cent bone
Veal.....	15 per cent bone

3o It is the easiest meat to ship. This is of prime importance on account of the scarcity of tonnage.

Advantages of the production of pork :

1o The hog matures more rapidly than any other animal. In one year a sow can give with one single litter from 1500 to 2000 lbs. of meat. A steer gives but one half that quantity, even when exceedingly well fed and belonging to a precocious breed.

2o The hog is the chief utilizer of all the by-products of our very prosperous dairy industry.

3o The raising of hogs which we are commending requires no capital, no expensive buildings and very little labor.

4o The selling prices are very high and shall probably increase in 1918. The demand of the allies is unlimited and a dull market is not to be feared.

WHAT WE MUST DO KEEP ONE MORE SOW

This is the call made upon all Ontario farmers. It is also that made by the Department of Agriculture of Quebec on all the farmers of this province.

There are in this province, 160,000 farmers. If each farmer keeps one more sow than his customary stock and raised its young, it means :

1,000,000 hogs,

Which we could sell in addition to our ordinary production. It means:

200,000,000 lbs. of meat,

which we could ship to the Allies. It means :

30 or 40 millions of dollars,

in the pockets of the farmers of this province.

SELECTION

In the present crisis, it would be foolish to waste time arguing over the question of breeds. Let us use the animals at our disposal, whether they be of the bacon type (Yorkshire, Tamworth) or of the lard type (Chester, Berkshire). The main matter is to select a good breeder, pure-bred or grade.

The following are the main qualities to be sought :

1o Origin. The sow must come from a prolific mother of excellent quality and selected from a sturdy litter.

2o Nursing qualities. If the sow comes from a good nurse and if she also has a dozen well placed and well developed teats, we have every reason to believe she will feed her young well.

3o Conformation showing a production of meat and aptitude for maternity. Length, thickness and good width of body, development of the pelvis, etc.

3o Age... An aged sow having proven and shown her breeding qualities should be preferred. If a young yearling sow can only be kept or obtained, it is advisable to wait until she is eight months old before having her bred.

DATE OF SERVICE

It depends when the sow is in heat and moreover on the desirable date of farrowing. Farmers who have warm and hygienic piggeries may have their sows farrow early in the spring. The others had better wait.

It must be remembered that the gestation of the sow lasts about 117 days (3 months, 3 weeks, 3 days).

The following table may perhaps give useful information :

Service	Farrowing	Service	Farrowing	Service	Farrowing
1 Dec.	22 March	1 January	22 April	1 Febry	23 May
2	23	2	23	2	24
3	24	3	24	3	25
4	25	4	25	4	26
5	26	5	26	5	27
6	27	6	27	6	28
7	28	7	28	7	29
8	29	8	29	8	30
9	30	9	30	9	31
10	31	10	1 May	10	1 June
11	1 April	11	2	11	2
12	2	12	3	12	3
13	3	13	4	13	4
14	4	14	5	14	5
15	5	15	6	15	6
16	6	16	7	16	7
17	7	17	8	17	8
18	8	18	9	18	9
19	9	19	10	19	10
20	10	20	11	20	11
21	11	21	12	21	12
22	12	22	13	22	13
23	13	23	14	23	14
24	14	24	15	24	15
25	15	25	16	25	16
26	16	26	17	26	17
27	17	27	18	27	18
28	18	28	19	28	19
29	19	29	20		
30	20	30	21		
31	21	31	22		

WINTERING OF THE SOW

The sow should be sanitarly housed. An expensive building is not necessary. The main thing is to provide a dry night lodging for the sow supplied with a good litter and well aired without a draft.

Strictly, a simple portable pen made out of a single thickness of board, may suffice, if there is a warmer place prepared in the stable or elsewhere for the time of farrowing or if the latter occurs very late.

Precaution should be taken for to have the sow take exercise. One of the best means perhaps is to give her free access to the dungyard.

As the sow can no longer find in the soil the necessary elements for the formation of her foetus, these must be provided under the form of wood ashes, charcoal, ground bones and salt.

The feeding of the sow in bearing should be sufficient but economic. The ration should maintain the animal in a proper state of flesh, but without excess of fat.

A certain quantity of meal is necessary. Ground oats and shorts are probably the best and most economic concentrates. Rich meal and Indian corn should only enter the ration in small proportion.

Roots constitute both an economic and hygienic food for wintering sows. The quantity which may be from 15 lbs and over, per day, at the commencement of gestation, should be reduced to a few pounds, immediately before farrowing.

Clover hay saved in proper condition should always be given at will.

If the sow gets roots she will rarely be constipated ; contrariwise a little linseed-cake is useful for preventing constipation, always dangerous for sows in bearing.

CARE BEFORE WEANING

During the period between birth and weaning the farmer should spare no pains for the sow and her young. The future rearing depends on this period.

The sow which should only get a very light ration after farrowing will be accustomed little by little to get an abundant and well balanced ration. A sow with litter should not be skimmed with food, for experience has shown that it is at such time the young pigs make the greatest and most economic gains.

Then also the by-products of the gristmill are recommendable. A little richer meal with ground meat or skim-milk in preference should be added.

Roots, at the end of 15 days, constitute one of the best foods. Half sweet or fodder beet-roots are preferable for they facilitate lactation. It is unnecessary to chop them up.

During three weeks the young pigs only take their mother's milk. Generally they begin to eat at this period or at least they try to. There is not much inconvenience in letting them eat with the mother and it greatly simplifies labor and installation.

When possible it is preferable to give special food to the young pigs. That necessitates a division with bars far enough apart for the young pigs to get through and close enough for the sow not to have access to the special place thus formed. The young pigs should then be given a mash of meal and skim-milk, oatmeal, whole grain steeped, beet-roots, etc.

The young pigs will thus be accustomed to eat at the time of weaning which takes place between 6 or eight weeks. This period of transition will pass, in such manner, without any difficulty.

CARE AFTER WEANING

PASTURE AND SKIM-MILK

For a few weeks it is preferable to give mashes of meal and skim-milk with a little oatmeal as the principal food to weaned pigs. Such food contains all the elements for making bone and flesh and will promote growth.

Afterwards, all the economic food at hand may enter into the ration.

Until the pigs weigh 130 to 140 lbs green fodder or pasture should save a large quantity of grain.

This year, good farmers should not hesitate to sacrifice one arpent of clover, well developed clover, for the litter of pigs we are asking them to raise. They will obtain a better result by dividing this plot into several enclosures. The clover will grow up again while the pigs pasture in another. Pigs when growing find all the elements suitable for them in clover. A complement of meal however remains necessary. The ration of grain to be given is reduced by half. The best experimenters estimate that one arpent of clover pasture should economize 1500 lbs of grain.

The quantity of grain or meal to be given depends on the animal and the condition of the pasture. Simply as an indication we would advise the following according to the weight of the animal :

Hogs of	60 lbs.....	1.5 of grain
"	90 ".....	2 lbs. of grain
"	120 ".....	3 lbs. of grain
"	150 ".....	4 lbs. of grain
"	200 ".....	4 to 5 lbs. of grain

Green clover may be fed as green fodder. This requires more labor but saves waste. 4 or 5 lbs. of clover cut and fed as green fodder have a feed value equal to one pound of grain.

Peas, rapes, lentils and early turnips may be fed in the same way as clover.

All these fodders, turnips excepted, are exceedingly rich in azote matters, the best flesh producing element. To balance the ration, it is advantageous to mix the fodders with grain or meal rich in hydrocarbonate matters (barley, Indian corn, etc.).

The same thing applies to skim-milk. Regarding this precious by-product, it is well to recall two other important rules :

1o *The younger the animal is, the more it benefits from skim-milk.* The breeder who has at his disposal only a limited quantity of skim-milk, must keep the best portion of it for the young pigs after weaning.

2o *Skim-milk is the more valuable when given in small quantity to each animal and proportionately to the ration of grain.*

Professor Henry sums up the results of 19 feed trials conducted by him at the Wisconsin Experiment Station.

When 1 lb. of meal is fed with : .. 100 lbs. of meal are replaced by :

1 to 3 lbs. of skim-milk	327 lbs. of skim-milk
3 to 5 lbs. of skim-milk	445 lbs. of skim-milk
5 to 7 lbs. of skim-milk	574 lbs. of skim-milk
7 to 9 lbs. of skim-milk	552 lbs. of skim-milk

Thus the best results are obtained by not feeding over 3 lbs. of skim-milk for each pound of grain.

The experiments of Mr. Grisdale at the Experimental Farms show it to be preferable—generally—not to feed more than 5 lbs. of skim-milk per day to a hog over 100 lbs. in weight.

Skim-milk per day and per animal : Pounds of skim-milk required for 100

	lbs. of grain
2 lbs.	183 lbs.
3 lbs.	323 lbs.
5.4 lbs.	538 lbs.
15.7 lbs.	734 lbs.
17.1 lbs.	882 lbs.

When fed in a moderate way it may be said that not more than 6 lbs. of skim-milk are required for one lb. of grain.

The organized and private butter industry in the Province of Quebec, gives, as by-product, an enormous quantity of skim-milk. This quantity has been estimated at 1,000,000,000 lbs. If these figures are exact, it is equivalent to 167,000,000 lbs. of meal or grain. That is an enormous quantity of feed which in these critical times should be utilized with care.

FATTENING

WHEN TO STOP.

The English and Allied market does not call for too fat a meat. The bacon most in demand is that from an animal of about 200 lbs. live weight.

American, Canadian and Danish tests, prove without doubt, that a pound of meat increases in cost proportionately to the increase of the animal in weight. The following table places the fact in evidence.

Weight of the hog :	Quantity of grain consumed per one pound of meat :
15 to 50 lbs.	2.93 lbs.
50 to 100 lbs.	4 lbs.
100 to 150 lbs.	4.37 lbs.
150 to 200 lbs.	4.82 lbs.
200 to 250 lbs.	4.98 lbs.
250 to 300 lbs.	5.11 lbs.
300 to 350 lbs.	5.35 lbs.

The fattening must commence when the hog weighs between 120 and 130 lbs.

When the animal is kept in a pen or small enclosure it must be given as much feed as it can consume without waste. Meal must then constitute the main portion of the ration. Two things not to be neglected in order to keep the animal in good appetite to the end, are : regular meals and the removal of the feed left uneaten.

A LITTER IN THE AUTUMN

CULTIVATE ROOT-CROPS.

We urge breeders with comfortable piggeries to breed their sows that have farrowed in the early Spring for a second litter in the Fall ; end of September or beginning of October.

This will permit them to place on the Spring market a lot of hogs which should sell for very good prices.

For winter feeding roots are almost indispensable. Good breeders should not neglect to put one arpent or more in root-crops or $\frac{1}{2}$ arpent in beets.

The roots fed in moderate quantities have a great feed value. 500 or 600 lbs. have a feed value equal to 100 lbs. of grain. One arpent in roots will save several tons of meal.